

REMARKS

Claims 58, 60-65, 68, 71-77 and 80-81 are currently pending in the present application.

In the final Office Action, the Examiner rejects claims 58, 60-65, 68 and 71-76 under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 4,559,169 of Wevers, *et al.* ("Wevers"), in view of U.S. Patent Application Publication No. US 2004/0138086 of Cooper, *et al.* ("Cooper"). Specifically, the Examiner contends that Wevers discloses a microemulsion detergent composition comprising a natural oil, water, hydrophilic and lipophilic emulsifiers (i.e., polymeric quaternary ammonium compounds and ethoxylated fatty alcohols), "wherein the composition is contacting and rinsing a fabric... [abst., C.1, L.25-30, & C.12, L.58]." (*See*, the final Office Action, p. 2).

The Examiner acknowledges that Wevers fails to teach or suggest the use of an automatic washing machine. However, the Examiner contends that Cooper remedies this admitted deficiency of Wevers by teaching an aqueous method of treating and rinsing a fabric using an automatic washing machine. The Examiner argues that it would have been obvious to one of ordinary skill in the art to combine the fabric treating method of Cooper with the microemulsion composition of Wevers.

Additionally, in the final Office Action, the Examiner rejects claims 77 and 80-81 under 35 U.S.C. §103(a), as being unpatentable over Wevers. Specifically, the Examiner contends that Wevers teaches a microemulsion detergent composition comprising a natural oil, an antioxidant, water, and hydrophilic and lipophilic emulsifiers. The Examiner acknowledges that Wevers fails to teach or suggest the average droplet size as claimed. However, the Examiner argues that the size of droplets "are direct consequence of mechanical stirring and mixing energy applied on the system[, and t]hese variables are controllable and adjustable with respect to types of desired emulsions (e.g. microemulsion, nanoemulsion... etc.)." (*See*, the final Office Action, p. 5).

Applicant respectfully traverses the Examiner's obviousness rejections and the arguments and contentions set forth in support thereof for at least the following reasons.

To begin with, Applicant would like to reiterate that one embodiment of the claimed invention is directed to methods which comprise: (a) providing a microemulsion comprising a natural oil and an emulsifier system, wherein the emulsifier system comprises a hydrophilic emulsifier, a lipophilic cationic emulsifier, and 40 to 90% by weight water, wherein the hydrophilic emulsifier comprises an ethoxylated fatty alcohol; and (b) contacting a fabric with the microemulsion in an automatic washing machine during a rinse cycle. Additionally, another embodiment of Applicant's claimed invention is directed to microemulsions which comprise: a natural oil, an antioxidant, and an emulsifier system; wherein the emulsifier system comprises a hydrophilic emulsifier, a lipophilic emulsifier, and 40 to 90 weight percent of water, wherein the hydrophilic emulsifier comprises an ethoxylated fatty alcohol; and wherein the microemulsion has a droplet size  $d_{50}$  less than 500 nanometers.

Applicant respectfully submits that the Examiner's contentions regarding Wevers are factually inaccurate. Specifically, the Examiner contends that Wevers teaches a microemulsion detergent composition which comprises a natural *oil*. In this regard, the Examiner cites column 6, lines 25-35 and column 21, line 58. Applicant respectfully submits that Wevers contains no such disclosure. At column 6, lines 17-35, Wevers discloses that the compositions described therein may also contain from about 3% to about 30% of *a fatty acid* containing from about 10 to about 22 carbon atoms. *Wevers goes on to note that suitable saturated fatty acids can be obtained from natural sources such as plant or animal esters (e.g., stripped palm kernel oil, stripped palm oil and coconut oil).*

However, in contrast to the present invention, Wevers discloses only the inclusion of *a fatty acid component*. The fatty acids suitable for use in the compositions of Wevers may be *derived from plant or animal oils*. This is not a teaching or suggestion of the inclusion of a natural oil in the composition. The *fatty acids derived from such oils* are the result of the fat-splitting of the fatty acid component from the glycerol backbone. In other words, the triglyceride

oil is subjected to fat-splitting to separate the fatty acids from the glycerol. Again, in contrast to Wevers, the present invention comprises a natural oil component, *i.e.*, the whole oil, meaning the unsplit glyceride having one or more fatty acid moieties pendant from a glycerol backbone. Thus, the Examiner's contention that Wevers teaches a detergent composition in the form of a microemulsion containing a natural oil is inaccurate.

Furthermore, the Examiner contends that Wevers discloses contacting a fabric with the compositions described therein, and rinsing. While the sole recitation of "rinsing" in Wevers, at col. 12, line 58, may suggest the rinsing of a fabric after application of the compositions disclosed therein, this is far from a disclosure or a suggestion to one of ordinary skill in the art that the compositions described therein *be applied to a fabric while rinsing*. In the methods of Applicant's claimed invention, the microemulsion composition comprising the natural oil, emulsifier system and water is contacted with a fabric in a washing machine during a rinse cycle. The mention of a rinse in Wevers applies to removing the product which had been applied prior to the rinsing. The exact words from Wevers are as follows: "1 ml of product applied + rub + rinse." (*See*, Wevers, col. 12, line 58). Such removal of the previously applied product is not suggestive of applying the composition during the rinsing.

Applicant's invention is directed to textile *after-treatments*, not textile cleaning processes. Textile after-treatment is directed to the regular maintenance of textiles. Textile after-treatments are not performed with laundry detergents which contain significant amounts of anionic and/or nonionic surfactants. In this regard, it is noted that Wevers is directed to laundry detergent compositions which comprise from about 3 to 50% of an anionic synthetic surfactant. Moreover, the present invention contains a very specific emulsifier system comprising a lipophilic cationic emulsifier and ethoxylated fatty alcohols as a hydrophilic emulsifier. The inclusion of 3 to 50% of an anionic surfactant would be incompatible with the claimed emulsifier system as understood by one of ordinary skill in the art.

The Examiner cites the Cooper reference in an attempt to remedy the deficiencies of Wevers identified by the Examiner. Cooper is cited in support of the use of the Wevers

composition in an automatic textile washing machine. Applicant respectfully submits that while Cooper discloses various laundry compositions (none of which suggest Applicant's microemulsion) which can be used in automatic washing machines during various cycles, there is no teaching or suggestion in Cooper which would lead one of ordinary skill in the art to modify the composition of Wevers as necessary to arrive at Applicant's claimed invention and use such a modified composition in an automatic washing machine *rinse* cycle. In other words, while Cooper may disclose the use of various compositions in the any cycle, there is no teaching or suggestion in Cooper which would motivate one of ordinary skill in the art to modify Wevers in order to arrive at the compositions of the claimed invention.

As a *prima facie* case of obviousness requires a teaching or suggestion of each and every element of the claim, an articulated reason as to why one of ordinary skill in the art would be motivated to combine and modify the references as necessary to arrive at the claimed invention, and a reasonable expectation of successfully doing so, Applicant submits that the cited combination of Wevers and Cooper fails to establish such a *prima facie* case of obviousness.

Specifically, the cited combination of Wevers and Cooper fails to teach or suggest a microemulsion composition which comprises a natural oil, and there is no reason why one of ordinary skill in the art would be motivated to deviate from the specific teachings of Wevers by using a fatty *oil* component *in place of the specifically recited fatty acid* which can be derived from an oil. Moreover, one of ordinary skill in the art would have no reasonable expectation of successfully treating a fabric during a rinse cycle with the compositions of Wevers based on the single mention of rinsing the applied product from a fabric after application of the product.

Therefore, Applicant respectfully submits that the pending claims patentably distinguish over the cited prior art. Reconsideration, withdrawal of the rejections and a Notice of Allowance are respectfully requested.

Respectfully submitted,

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August 20, 2008  
(Date)

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